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Cytogenetic investigations in two endangered pig breeds raised in Southern-Italy

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Pig from Casertana and Siciliana breeds are two endangered breeds raised in the southern-Italy (Campania and Sicily regions, respectively) and characterized to have a black skin. Special projects are trying to save and characterize both of them by using several approaches. In this study we report the preliminary results we obtained after a cytogenetic investigation we performed by using both C and R-banding techniques and the sister chromatid exchange (SCE) test to verify their chromosome stability under the environmental conditions. Fifty-two pigs from Casertana breed and 19 pigs from Siciliana breed were investigated. All animals from both breeds showed a normal karyotype, with the exception of two male pig from Siciliana breed which were found heterozygous carrier of rob(15;17) (2n=37, XY), probably being hybrids with the wild pig (2n=36) present in the Nebrodi mountains where this breed is raised in Sicily. SCE-test applied on 42 pigs from Casertana breed (22 males and 20 females) and 19 pigs from Siciliana breed (8 males and 11 females) revealed no statistical differences between the SCE-mean number in Casertana pig (7.13 ± 3.20) than that (6.87 ± 3.12) achieved in Siciliana pig. Statistical differences were found between males (7.26 ± 3.38) and females (6.59 ± 2.90) of Siciliana pig breed, as well as between females of Casertana (7.24 ± 3.26) and Siciliana (6.59 ± 2.90), while no statistical differences were found between males of the breeds, as well as between males and females of Casertana breed.

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